

CONFERENCE

PR

UCB Network Retreat

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AOI as a 'NOW' Internet as a 'NOW'

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AOL as a NOW



- ◇ Large Cluster of Unix and NT, hubs routers
 - 10k's of simultaneous users
 - >10k new users a day
- ◇ Heterogeneous computing and networking
- ◇ Off the shelf software, mostly

Operations Issues for AOL

- ◇ Scalability:
 - tripled last year
 - 4 million email messages/day
 - e.g. gopher/wais gateway is 13 machines, email gateway is several...
- ◇ Reliability: machines, network, software
- ◇ Conservative

Internet as a NOW

- ◇ Distributed AOL or Dialog
- ◇ Protocols: few,
 - server software: many,
 - client software: bunches,
 - server instances: lots <<<<<<< Value of the net
 - client instances: tons <<<<<<<< Value of the net
- ◇ Unix is losing its dominance to:
 - dedicated hardware
 - PC's, Macs, NT

Internet Problems: Structural

- ◇ Technology stream, but no revenue stream
- ◇ Standards process needs help:
 - Reference implementations
 - Better structured system: committees?
- ◇ Lack realtime networking
- ◇ Point-to-point system
 - Except dns, routing, multicast

Infrastructure Needs

◇ Caching: “cFTP, cHTTP”?

- Log info for billing/advertising to owner
- Control of distribution
- Timely changes of data

◇ Reliability

- Mirroring is klunky
- Network hotspots
- Server admin's graduate: no archiving yet

◇ Supernodes “in” network: MIPS, storage, bandwidth, remote control: java server?

Infrastructure needs (more)

- ◇ Multi-user “sockets” for app development:
 - Chat, MUD's, Virtual spaces
- ◇ Realtime applications:
 - Telephone, conf calls, fast-twitch games
- ◇ Virtual University: beyond the lecture hall
 - Video-on-demand for campus lectures
 - Extend libraries from paper to Lectures, class notes, etc. (tertiary storage, caching, ...)

Conclusion

- ◇ Internet could be the mother of all 'NOW's
- ◇ Internet needs help
- ◇ Internet is worth helping

Trends: Heavier usage,
Richer files,
Towards realtime

